



## Notes to San Francisco Perinatal Statistics Charts December 2005

### Introduction:

These notes relate to the eight attached perinatal statistics charts:

1. Total Births by Mother's Race/Ethnicity,  
San Francisco Residents 1996-2004
2. First Trimester Entry, Prenatal Care by Mother's Race/Ethnicity,  
San Francisco Resident Births 1996-2004
3. Third Trimester Entry and No Prenatal Care by Mother's Race/Ethnicity,  
San Francisco Resident Births 1996-2004
4. Low Birth Weight Newborns by Mother's Race/Ethnicity,  
San Francisco Resident Births 1996-2004
5. Very Low Birth Weight Newborns by Mother's Race/Ethnicity,  
San Francisco Resident Births 1996-2004
6. Infant Mortality Rate in Two-Year Intervals by Mother's Race/Ethnicity,  
San Francisco Resident Births 1996-2003
7. Infant Mortality Rate by Race/Ethnicity,  
United States, 1940 –2000
8. First Trimester Entry into Prenatal Care by Mother's Race/Ethnicity,  
United States, 1970 –2000

Charts 1 – 5 show San Francisco statistics over nine years. Chart 6 shows San Francisco statistics over eight years.

Charts 2 and 4 - 6 compare San Francisco rates to the United States Healthy People (HP) objectives for selected perinatal measures. First developed in 1990, these federal guidelines were revised and expanded for 2000 and again for 2010. In 1990 and 2000, there were separate objectives on some health issues for different racial groups. With increased national emphasis on eliminating racial disparities, there are no separate objectives by race for the 2010 HP objectives. See [www.healthypeople.gov](http://www.healthypeople.gov) for more information.

In general, for perinatal outcomes, San Francisco does better than California and California does better than the United States. However, San Francisco is not on track to reach the HP 2010 objectives for all racial groups. Clearly, there are racial disparities in

access to health care and health status in San Francisco. Whites appear to be the healthiest followed by Asians, and then by Latinas and Blacks.

The Asian category represents people who are Chinese (the largest Asian group in San Francisco) and every other Asian and Pacific Islander group such as Cambodian, Filipino, Hawaiian, Japanese, Korean, Samoan, Thai, Tongan, and Vietnamese.

The Latina population exhibits what is sometimes called the 'Latina paradox.' Immigrant Latinas generally have healthier infants than those of the native-born Americans in the same neighborhoods and socio-economic circumstances. Here, 'healthy infants' means those of normal weight who were born of a full term pregnancy. Each succeeding generation, however, tends to have poorer birth outcomes. The good health status of the infants of immigrants may be related to the greater family and social support and the better nutrition that persists for a time in the immigrant Latina community. There may also be other factors yet to be explored. Entry into care rates for Latinas are appreciably lower than whites and Asians yet low birth weight and infant mortality rates are generally comparable, sometimes better and sometimes not quite as good.

The Black population consistently shows rates that most need to be improved when compared to the other three major racial/ethnic groups.

Risk factors are included for charts 3 through 6. These habits or characteristics, which can increase the possibility of developing these poor birth outcomes, affect the population as a whole. They do not predict what will or will not happen to a particular woman. They may be of use in program planning when examining the characteristics of a target population or addressing poor health habits. Ongoing research may clarify the workings of risk factors and which program interventions are cost-effective in achieving better birth outcomes and reducing health disparities.

For a historical overview of two measures of perinatal health for the United States during the twentieth century, see Charts 7 and 8.

**Please note** that the charts **do not all start at zero** and are **not on the same scale**. Please note also that for charts 2 and 8 (first trimester entry into care for San Francisco and the United States, respectively), higher rates mean better outcomes. For charts 3 through 7, lower rates mean better outcomes.

The same symbol key is used throughout:

Total	=	● (orange)	Asian	=	■ (red)	Black	=	■ (purple)
HP 2010	=	(black)	Latina	=	▲ (green)	White	=	(blue)

Permission is freely given to reproduce the charts; please include the source. If you have questions, or would like additional data, please contact Isabel Auerbach, MPH, CHES, Perinatal Outreach Coordinator, at 575-5684 or [Isabel.Auerbach@sfdph.org](mailto:Isabel.Auerbach@sfdph.org).

### Information by Chart:

**Chart 1** “Total Births By Mother’s Race/Ethnicity” shows the trends of births over these nine years. The total number of births, ‘n,’ for each year is shown. The line for ‘all others’ shows births that do not fit the other racial/ethnicity categories. The outcomes for this small number of births are not shown on the remaining charts.

The overall number of births declined from 1996 to 1999. Since then it has risen and fallen. Only one group, whites, has shown a steady increase. The Black birth downtrend is most striking. The City’s Black population declined from approximately 10% in 1996 to less than 7% in 2005 as the Black community moved to other parts of the Bay Area, or further, for economic reasons such as jobs and more affordable housing. Further, the Black birth rate (the ratio of the number of infants born to every thousand women between the ages of 15 – 44) has declined much more than that of other groups in San Francisco. The white birth rate is the only stable birth rate.

There is a spike in the Asian births in 2000, almost certainly caused by the fact that 2000 was a Golden Dragon year, an especially auspicious year according to Asian tradition. Births returned to their previous level in 2001.

It was mentioned above that, in general, whites have the best health outcomes followed closely by Asians. Latinas follow Asians and Blacks have the poorest rates. This order is especially visible on charts 2 and 3. The total births chart seems to follow this same pattern: whites highest, then Asians, Latinas, and lastly Blacks. However, this chart simply counts the number of births. There is no rank significance in the order.

**Chart 2** “First Trimester Entry Into Prenatal Care By Mother’s Race/Ethnicity” shows a continual, though not dramatic, overall upward trend since 1999. First trimester entry into prenatal care is sometimes referred to as early entry into care. It is an important determinant of perinatal health though not, in itself, sufficient. A woman may go to a first trimester appointment and then fail to go to additional appointments regularly or at all. Early care is a crucial time for intervention. Providers have the chance to discuss or provide care or referrals for physical examination, birth defect screening, HIV and STD (sexually transmitted disease) screening, intimate partner violence screening, financial matters, housing, psychological concerns, and health education issues such as alcohol, tobacco, exercise, breastfeeding, car seats, lead exposure, infant sleeping position, and nutrition.

The racial disparities in the rates of first trimester entry into care can clearly be seen. The white population exceeds the HP 2000 and HP 2010 objective of 90%. The Asian population comes close to reaching it. The Latina population is from eight to thirteen percentage points below the objective with improved rates of over 80% since 2002. The Black population is consistently the lowest of all groups and must improve by almost 15 percentage points to reach the HP objective.

Risk factors for not obtaining early prenatal care are low income, low level of education, teen pregnancy, substance use, lack of health insurance, and being on Medi-Cal.

**Chart 3** “Third Trimester Entry and No Entry Into Prenatal Care By Mother’s Race/Ethnicity” has no HP 2010 objective. We include this rate combining late entry and no entry into care as a picture of those women who are not being served well by the health care system.

Black women have the highest combined rates of late and no prenatal care. Latinas are next, Asian women follow, and white women have the lowest (best) rates.

Entering care in the third trimester, rather than the second, may be very different though neither is early entry. Women may start care in the second trimester because they could not get an appointment quickly, did not have clear symptoms of pregnancy, had problems with health coverage, or been ambiguous about the pregnancy.

Women who enter care in the third trimester, or not at all, often have multiple, serious problems. Risk factors for late/no entry into care are drug use, homelessness, teen pregnancy, issues with immigration/legal status, low income, low level of education, and lack of health insurance. With poor support systems and poor access to health and social services, women with these characteristics need innovative outreach and retention programs.

**Chart 4** “Low Birth Weight Newborns By Mother’s Race/Ethnicity,” shows the rates of infants born weighing less than 2500 grams, or approximately 5.5 lbs. Birth weight is a longstanding marker of infant health and survival ability.

No group has yet met the HP 2000 and HP 2010 objective of no more than 5%; Blacks did not meet the separate HP 2000 objective of no more than 9%. Whites, Asians, and Latinas are clustered together several percentage points above the objective. Blacks have a significantly higher rate.

Tobacco is strongly demonstrated to correlate with low birth weight. On average, women who smoke give birth to babies that weigh 200 grams (about 7 ounces) less than babies of nonsmokers. Other risk factors for low birth weight include young or old maternal age, low income, low level of education, short interpregnancy interval (length of time between pregnancies), multiple birth, preterm birth (not carrying a pregnancy to full term), late entry into care, low pre-pregnancy weight, and use of alcohol or other drugs during pregnancy.

**Chart 5** “Very Low Birth Weight Newborns By Mother’s Race/Ethnicity” shows rates of those infants born at even greater risk than the low birth weight newborns shown in Chart 4. Very low birth weight babies weigh no more than 1500 grams, or approximately 3.3 lbs. They are a subset of the low birth weight category.

Very low birth weight rates are similar to low birth weight rates in that whites, Asians, and Latinas all have fewer occurrences of poor rates. The three groups achieve the HP 2000 objective of no more than 1%, and the HP 2010 objective of no more than .9%, for some, but not all, years. Blacks reach the separate HP 2000 rate of no more than 2% in 1997. However, their rates are much higher than the other groups for all years shown.

Risk factors for very low birth weight are preterm birth, prior preterm birth, and use of tobacco, alcohol, or other drugs.

**Chart 6** “Infant Mortality Rate in Two-Year Intervals By Mother’s Race/Ethnicity” uses two-year, rather than one-year, intervals to increase statistical reliability since the actual number of infants who die in San Francisco is small. The infant mortality rate is a crucial standard measure, the ratio of the number of infants under one year of age who die to every thousand infants that are born. In order to compute the rate, an entire year must pass from the date of birth. For example, a child born on December 31, 2003 was at risk of infant mortality until December 31, 2004.

In San Francisco, the two-year white, Asian, Latina, and total rates for 1996-1997 and 1998-1999 meet the HP 2000 objective of no more than 7 deaths per thousand infants born. These same groups have rates for 2000-2001 that are under the HP 2010 objective of no more than 4.5 deaths per thousand. In 2002-2003, the Latinos rise to 5 deaths per thousand and thus are above the HP 2010 objective. However the Asian, white, and total rates still meet the objective.

The infant mortality rates of the Black population are several times greater than that of the other groups. Blacks did not meet the separate HP 2000 objective of no more than 11 deaths per thousand infants in 1996-1997 or 1998-1999, nor do they meet the HP 2010 objective in subsequent years thus far. It appears that the 2000-2001 and 2002-2003 rates are substantial improvements for Blacks, but the drop is deceptive. While the infant mortality rate has dropped, there is an increase in combined infant and fetal deaths. This is due to mortality in fetuses born after 20 weeks who are not counted in the infant mortality rate.

For more information about fetal mortality, see [www.citymatch.org](http://www.citymatch.org) and click on “Perinatal Periods of Risk (PPOR).” PPOR is a data analysis tool developed by the federal Centers for Disease Control and Prevention that identifies four periods of risk: (1) preconceptional/maternal health, (2) maternal care during pregnancy, (3) newborn care, and (4) infant health. For an overview of Bay Area perinatal health, using the PPOR model, go to [www.marchofdimes.com/professionals/682\\_16320.asp](http://www.marchofdimes.com/professionals/682_16320.asp) and scroll down to “Disparities in Preconception Health Care” and the last presentation, “Disparities in Perinatal Outcomes Using PPOR: Results from the Bay Area Collaborative,” by Ellen J. Stein, M.D., Medical Director of the Maternal, Child and Adolescent Section, San Francisco Department of Public Health,

Risk factors for infant mortality include prematurity, low birth weight, congenital anomalies, young maternal age, low level of education, poor maternal nutrition, inadequate prenatal care, maternal psychosocial problems, maternal medical complications/illness during pregnancy (notably diabetes), injury (including domestic violence), infection, respiratory distress syndrome, family history of Sudden Infant Death Syndrome (SIDS), and use of tobacco, alcohol, or other drugs.

**Chart 7** “Infant Mortality Rate by Race/Ethnicity, United States, 1940-2000” shows the significant drop in infant mortality in the twentieth century. Chart 7 contains data only for whites and Blacks since comparable data for Asians and Latinas are not available for

the years included. The charts further show that, in spite of large improvements, racial disparities have persisted for a long time.

**Chart 8** “First Trimester Entry Into Prenatal Care by Mother’s Race/Ethnicity, United States, 1970-2000” shows a continual rise in early entry. Like Chart 7, it includes data only for whites and Blacks and shows a similar persistence of racial disparities.